

We claim:

1 A system comprising:

an editor to provide for developing source code for a computer program, said source code including an identifier;

an automatic help module invoked upon a predetermined event and operative to display information associated with the identifier.

2. The system of claim 1, wherein the identifier is a function name, macro name, or template name.

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3. The system of claim 1, wherein the identifier is an attribute name.

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4. The system of claim 1, wherein the reference information is displayed within a tooltip box.

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5. The system of claim 1, further comprising a database module operative to supply at least a subset of the information when queried by the automated help module.

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6. The system of claim 5, wherein the database module manages a pre-created database and a dynamically updated database, said pre-created database and dynamically updated database containing reference information on a plurality of entities; and wherein the automatic help module queries said pre-created database and dynamically updated

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database to obtain reference information on an entity matching the identifier.

<sup>9</sup>  
7. The system of claim 1, further comprising a parser operative to parse the source code and to obtain parsed data for the identifier.

<sup>9</sup>  
<sup>10</sup>8. The system of claim <sup>9</sup>7, wherein the parsed data includes a data type for the identifier.

<sup>9</sup>  
<sup>11</sup>9. The system of claim <sup>9</sup>7, wherein the parsed data includes a class specifier for the identifier.

<sup>12</sup>  
<sup>10</sup>10. The system of claim 1, wherein the automatic help module further comprises a comment search module operative to scan a set of source code for a code comment associated with the identifier and wherein the reference information displayed comprises the code comment.

<sup>11</sup>  
<sup>11</sup>11. The system of claim 2, wherein the reference information comprises a parameter list for a function identified by the function name.

<sup>12</sup>  
<sup>12</sup>12. The system of claim <sup>11</sup>11, wherein a required parameter is highlighted within the reference information.

13. The system of claim 1, wherein the predetermined event occurs when a cursor is

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positioned over the identifier.

14. The system of claim 1, wherein the predetermined event occurs when the identifier is entered into the source code.

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~~15. A method comprising:~~

- ~~developing at least a section of source code for a computer program, said source code including an identifier;~~
- ~~detecting an event;~~
- ~~searching for information on the identifier in response to the event;~~
- ~~displaying the information.~~

16. The method of claim 15, wherein the event comprises entering an identifier into the source code.

17. The method of claim 15, wherein the event comprises positioning a cursor over the identifier.

18. The method of claim 15, wherein searching for information includes searching a database for information.

19. The method of claim 15, wherein searching for information includes searching a source file for comments associated with the identifier.

20. The method of claim 15, wherein displaying the information displays the information in a tooltip box.

21. The method of claim 15, wherein searching for information includes dynamically parsing the section of source code to provide parsed data and using a subset of the parsed data as a search parameter.

22. A computer comprising:  
a processor;  
a computer-readable medium;  
an editor to provide for developing source code for a computer program, said source code including an identifier; and  
an automatic help module invoked upon a predetermined event detected by the editor and operative to display reference information associated with the identifier.

23. The computer of claim 22, wherein the identifier is a function name.

24. The computer of claim 22, wherein the identifier is an attribute name.

25. The computer of claim 22, wherein the reference information is displayed within a tooltip box.

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26. The computer of claim 22, further comprising a database module containing at least a subset of the reference information.

27. The computer of claim 26, wherein the database module manages a pre-created database and a dynamically updated database, said pre-created database and dynamically updated database containing reference information on a plurality of entities; and wherein the automatic help module queries said pre-created database and dynamically updated database to obtain the reference information.

28. The computer of claim 22, further comprising a parser operative to parse the source code and to obtain parsed data for the identifier.

29. The computer of claim 28, wherein the parsed data includes a data type for the identifier.

30. The computer of claim 28, wherein the parsed data includes a class specifier for the identifier.

31. The computer of claim 22, wherein the reference information comprises a parameter list for a function identified by the identifier.

32. A computer readable medium containing computer-executable instructions for performing a method comprising:

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developing at least a section of source code for a computer program, said source code including an identifier;  
detecting an event;  
searching for information on the identifier in response to the event;  
displaying the information.

33. The medium of claim 32, wherein the event comprises entering an identifier into the source code.

34. The medium of claim 32, wherein the event comprises entering a separator token into the source code.

35. The medium of claim 32, wherein the event comprises positioning a cursor over the identifier.

36. The medium of claim 32, wherein searching for information includes searching a database for information.

37. The method of claim 32, wherein searching for information includes searching a source file for comments associated with the identifier.

38. The method of claim 32, wherein displaying the information displays the information in a tooltip box.

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39. The method of claim 32, wherein searching for information includes dynamically parsing the section of source code to provide parsed data and using a subset of the parsed data as a search parameter.

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